U. S. Department of Energy (DOE) Office of Nuclear Energy (NE) Notice of Opportunity:
NE Voucher Program Request for Assistance (RFA)

A. Overview

To support the strong interest in nuclear energy from a significant number of new companies working to develop advanced nuclear energy technologies, in fiscal year 2016 DOE-NE will provide up to $2 million dollars in vouchers to assist small business applicants seeking access to the knowledge and capabilities available across the DOE complex. This is one component of the Gateway for Accelerated Innovation in Nuclear (GAIN), a DOE initiative to provide the nuclear community with access to the technical, regulatory, and financial support necessary to move new or advanced nuclear reactor designs toward commercialization while ensuring the continued safe, reliable, and economic operation of the existing nuclear fleet. The objective of GAIN is accelerated and cost effective commercialization of innovative nuclear energy concepts. The Nuclear Energy Infrastructure Database (NEID) provides a list and description of many nuclear energy R&D capabilities at gain.inl.gov. This is a pilot program of limited scope that will be evaluated for future use. It is patterned after DOE's Office of Energy Efficiency and Renewable Energy Small Business Voucher Program established in 2015.

DOE-NE will accept applications in the following general topic areas:

- Structural material and component development, testing and qualification
- Advanced nuclear fuel development, fabrication and testing (includes fuel materials and cladding)
- Development, testing and qualification of instrumentation, controls and sensor technologies that are hardened for harsh environments and secured against cyber intrusion
- Analysis and evaluation of and for advanced reactor concepts and associated designs, including licensing strategies
- Modeling and simulation, high performance computing, codes and methods
- Technical assistance such as subject matter experts, data or information that can support technology development, or confirm key technical or licensing issues.

B. Eligibility Requirements and Certifications

Eligible Requester - An eligible requester is a small business that is (1) organized for-profit; (2) has less than 500 employees; (3) is majority (51%) owned by a U.S. citizen or lawfully admitted permanent resident alien; (4) is organized according to the laws of any of the 50 states, the District of Columbia, or any US territory or possession; and (5) operates primarily within the U.S. Products embodying intellectual property developed under the assistance must be substantially manufactured in the United States.

Company Certifications - Requestors must certify that they will accept the NE Voucher Program Agreements and they will provide the required 20 percent or more cost-share upon selection for a voucher. Details on NE Voucher Agreements can be found in Section C of this document. Further details on cost-share requirements can be found in Section F.

Eligible Types of Assistance - Assistance can provide access to unique capabilities and facilities in the DOE complex or at a partner facility. Vouchers cannot be used to obtain services or use equipment that is available in the private sector.

C. Voucher Details

Funding: Vouchers provide funding to a DOE National Laboratory or NSUF partner facility to help small businesses overcome critical technology and commercialization challenges. Vouchers are not financial awards made to small businesses. During the initial pilot project, DOE anticipates awarding up to 10 vouchers (totaling up to $2 M) in the areas described in Section A.

Period of Performance: It is the Department's strong preference that the vouchers activities are completed within 12 months from the date the agreement is executed.

Terms and Conditions: All voucher recipients will sign one of two standard agreements depending on whether or not intellectual property (IP) is developed as a result of the project. Both templates will be available at gain.inl.gov.

- Small businesses may engage with DOE National Laboratory or NSUF partner facilities on collaborative research and development (R&D) that may result in the development of IP. In that case, a Collaborative R&D Agreement (commonly known as a CRADA) may be the most appropriate contractual vehicle.
- Alternatively, vouchers may be awarded to requesters who do not anticipate the development of IP, and in those cases the Technical Assistance Pilot Agreement (commonly known as a TAPA) may be the more appropriate agreement.

Products embodying intellectual property developed with NE Voucher Program assistance must be substantially manufactured in the United States. Please refer to the specific agreements referenced above for further details.

DOE-NE is committed reducing the processing time; therefore terms and conditions in the CRADA and TAPA will not be negotiated.

D. Key Dates

- January 27 - Draft RFA released for comment
- February 16, 2016 – End of Public Feedback Period
- March 1, 2016 - Request for Assistance (RFA) opens
- March 30, 2016; 6:00 p.m. MT- RFA closes
- Mid-May, 2016 - Notification of selections
- Mid-May to Mid-June - Finalization of statement of work, budget and cost share
- July 2016 - Voucher work can begin

E. Merit Review Criteria

Requests for assistance will be evaluated in accordance with the following criteria:

1. Technical Merit (50 Points)

- Extent to which the requestor has clearly identified the problem or challenges the company is facing in developing innovative nuclear energy systems and how the assistance from the host institution can assist in overcoming these challenges. (10 points)
- Extent to which the applicants approach is realistic and feasible with respect to technical considerations, and is appropriately aligned with the host institution's capabilities. (20 points)
- Extent to which the innovation/concept/technology will contribute in a significant manner in one of more of the following areas towards the deployment of advanced nuclear energy systems or components. Examples of improvements could include but are not limited to: (20 points)
    - Economic competiveness (capital cost, operations cost, enhanced performance)
    - Capability to penetrate non-electricity market
    - Enhanced safety
    - Reduced environmental impact
    - Improved management of used nuclear fuel
    - Reduced proliferation risk
    - Increased regulatory acceptance.

2. Business and Market Impact (40 Points)

- Quality of the requestor's plan to utilize the results to advance their nuclear energy business, industry, or marketplace. (15 points)
- Extent to which the innovation/concept/technology will contribute to the overall nuclear energy marketplace or state of technology development. (15 points)
- Extent to which the requestor has a feasible plan for deploying the innovation/concept/ technology to the market. (10 points)

3. Qualifications and Experience (10 Points)

- Extent to which the requester is capable of executing a successful project and subsequent implementation or deployment with respect to qualifications and resources. (10 points)

F. Cost-Share

For more information on allowable cost-share, please refer to the Federal Acquisition Regulations (FAR) Part 31 at http://farsite.hill.af.mil/reghtml/regs/far2afmcfars/fardfars/far/31.htm).

Cost-share of no less than 20% is required. Requesters may provide cost share in the form of cash or in-kind contributions. Allowable in-kind contributions include, but are not limited to personnel costs; indirect costs; facilities and administrative costs; rental value of buildings or equipment; and the value of a service, other resource, or third party in-kind contribution.

Cost-share contribution must be reasonable, allowable, and allocable under the applicable Federal cost principles. In addition, cost share must be verifiable upon submission of the full application.

Requesters may use funding or property received from state or local governments to meet the cost-share requirement, so long as the funding was not provided to the state or local government by the Federal Government.

The following sources may NOT be used by the requester to meet its cost-share obligations, including, but not limited to, revenues or royalties from the prospective operation of an activity beyond the project period; proceeds from the prospective sale of an asset of an activity; federal funding or property (e.g., Federal grants, equipment owned by the Federal Government); or expenditures that were reimbursed under a separate Federal Technology Office. For example, Small Business Innovation Research (SBIR)/Small Business Technology Transfer (STTR) funding cannot be used to provide in-kind or direct cost-share. Small businesses with SBIR/STTR funding can make a request for assistance under the NE Voucher Program, but the scope of work must be distinct from existing SBIR/STTR projects.

Requesters may not use the same cash or in-kind contributions to meet cost-share requirements for more than one project or program.

G. Submitting a Request for Assistance (RFA)

If you are interested in submitting an application, please access the NE Voucher Program on the GAIN Website at gain.inl.gov. The final NE Voucher Program RFA and submission instructions will be available by March 1, 2016.

Please do not provide any proprietary information in the request or in supporting documentation or resumes.

Each eligible entity may submit up to two applications under the NE Voucher Program pilot; however, no more than one voucher application will be selected/finalized for an eligible recipient.

H. Request for Assistance (RFA)

The RFA template is provided below. Once completed, this document must be uploaded into the electronic NE Voucher Application. This also applies to the maximum of three, 2-page resumes, which are optional.

U.S. Department of Energy (DOE) Office of Nuclear Energy (NE) Voucher Request for Assistance (RFA)

Requests for assistance are limited to five pages of text to address Sections I, II, and III. An additional two page appendix may be used for supporting documentation, such as graphs, tables, and images. In addition, up to three, 2-page resumes for key personnel may be included to support Section III, Qualifications and Experience. Please use 11.5 Times New Roman font and 1" margins.

Section I: Technical Merit

1. Company Summary: Describe the mission and vision for your company. What differentiates your company from others in this market?
2. Problem Statement: Describe the challenge your company is facing and how this assistance, if granted, will help you overcome that challenge.
3. Work Scope: Describe the national laboratory or partner facility capability you need and the work you would like completed.
4. Nuclear Energy Impact: Describe how this project, if successful, will contribute to advancing nuclear energy deployment in one or more of the following areas:
    a. Energy generation economics
    b. Economic competiveness (capital cost, operations cost, enhanced performance)
    c. Capability to penetrate non-electricity market
    d. Enhanced safety
    e. Reduced environmental impact
    f. Improved management of used nuclear fuel
    g. Reduced proliferation risk
    h. New processes or materials
    i. New products or markets.

Section II: Business & Market Impact

1. Use of Project Results: Describe how the results of the proposed assistance will be used to advance the development of your company's products or services.
2. Market Analysis: Describe the expected impact on the broader market if the project is successful.
3. Deployment Approach: When and how will these new or improved products or services be introduced to the market or otherwise benefit your company?

Section III. Qualifications & Experience

List the key members of your company's leadership and technical team. Briefly describe their qualifications and experience. (Respondents may include up to three resumes).